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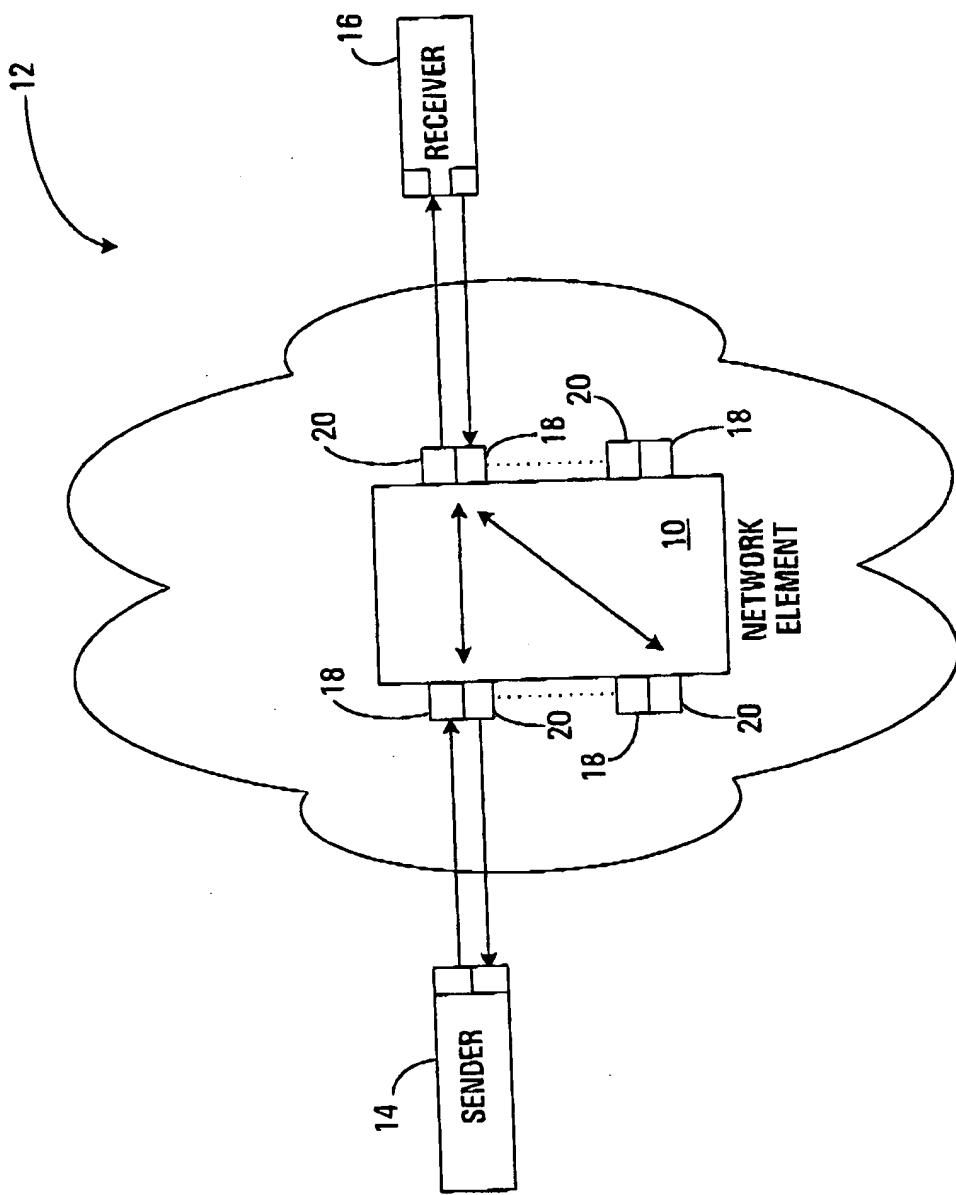


FIGURE 1

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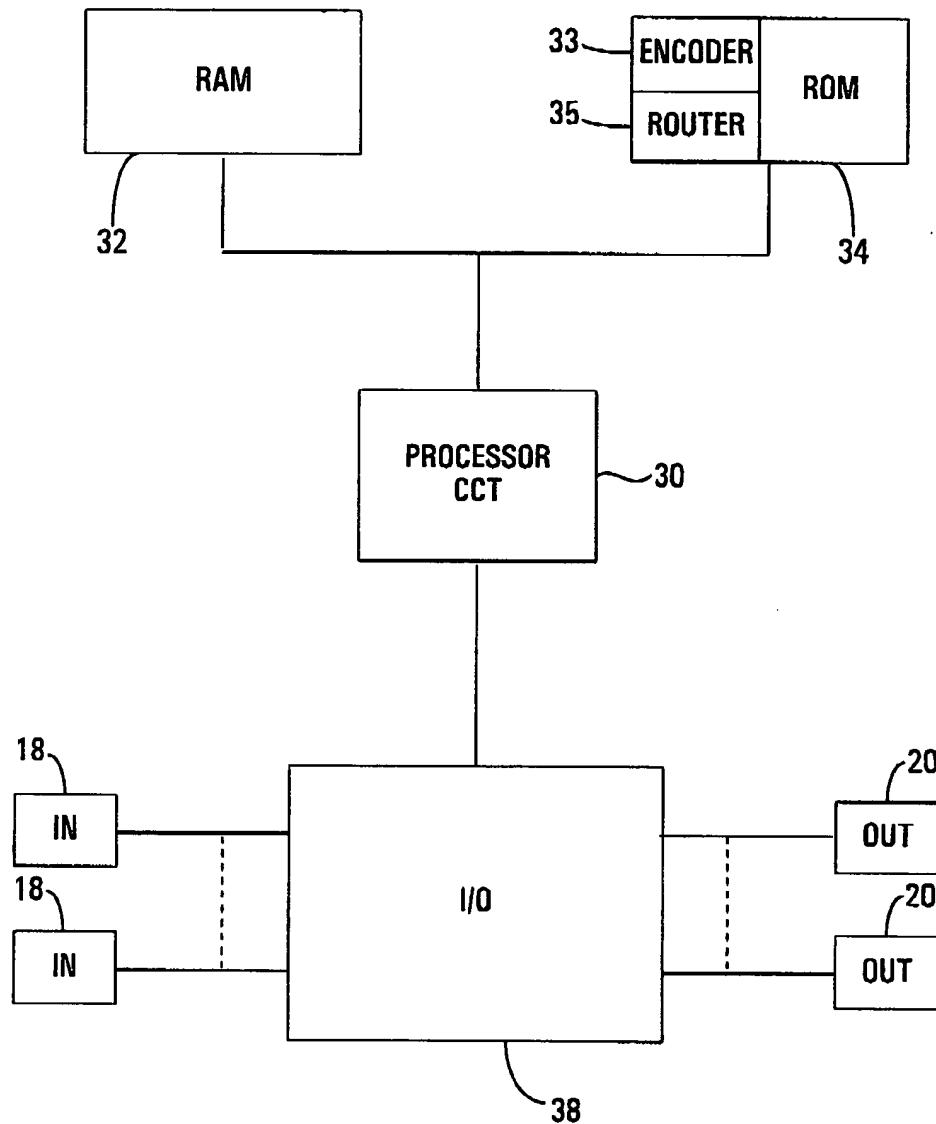


FIGURE 2

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ROW	LISTED PREFIX	PREFIX LENGTH	NEXT HOP INFO
1	0	1	nh ₁
2	00	2	nh ₂
3	0010	4	nh ₃
4	01	2	nh ₄
5	010	3	nh ₅
6	011	3	nh ₆
7	1	1	nh ₇
8	11	2	nh ₈
9	1110	4	nh ₉
10	11111	5	nh ₁₀

FIGURE 3

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1)	0	-	-	-	-	-	32)	0	0	0	0	0	0	1
2)	1	-	-	-	-	-	33)	0	0	0	0	0	0	1
3)	0	0	-	-	-	-	34)	0	0	0	1	1	0	0
4)	0	1	-	-	-	-	35)	0	0	0	1	1	0	0
5)	1	0	-	-	-	-	36)	0	0	0	1	1	0	1
6)	1	1	-	-	-	-	37)	0	0	0	1	1	0	0
7)	0	0	0	1	-	-	38)	0	0	1	0	0	0	1
8)	0	0	0	1	-	-	39)	0	1	1	0	0	0	1
9)	0	1	0	-	-	-	40)	0	1	1	0	0	0	1
10)	0	0	1	1	-	-	41)	0	1	1	1	1	0	1
11)	1	0	0	0	-	-	42)	0	1	1	1	1	0	1
12)	1	0	1	0	-	-	43)	0	1	1	1	1	1	0
13)	1	1	0	0	-	-	44)	0	1	1	1	1	1	1
14)	1	1	1	1	-	-	45)	0	1	1	1	1	1	1
15)	0	0	0	0	0	-	46)	0	1	1	0	0	0	0
16)	0	0	0	0	1	-	47)	1	0	0	0	0	0	1
17)	0	0	1	0	0	-	48)	1	0	0	0	0	0	1
18)	0	0	1	1	1	-	49)	1	0	0	0	0	0	1
19)	0	1	0	0	0	-	50)	1	0	0	0	1	0	0
20)	0	0	1	0	1	-	51)	1	0	0	0	1	0	1
21)	0	0	1	1	0	-	52)	1	0	0	0	1	1	0
22)	0	1	1	1	1	-	53)	1	0	0	0	1	1	1
23)	1	0	0	0	0	-	54)	1	1	1	0	0	0	0
24)	1	0	0	0	1	-	55)	1	1	1	0	0	1	0
25)	1	0	0	1	0	-	56)	1	1	1	0	0	1	1
26)	1	0	1	0	1	-	57)	1	1	1	0	0	1	0
27)	1	1	0	0	0	-	58)	1	1	1	1	1	1	0
28)	1	1	0	1	1	-	59)	1	1	1	1	1	1	1
29)	1	1	1	1	0	-	60)	1	1	1	1	1	1	0
30)	1	1	1	1	1	-	61)	1	1	1	1	1	1	1
31)	0	0	0	0	0	-	62)	1	1	1	1	1	1	1

FIGURE 4

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Bit position	1	2	3	4	5	6	7,8	9	10	11-16	17	18-28	29	30-61	62
PNBA	1	1	1	0	1	0	1	1	0	0	1	0	1	0	1

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FIGURE 5

Bit position	1	2	3	4	5	6	7,8	9	10	11-13	14	15-16	17	18-28	29	30-59	60	61	62
PNBA	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	0	1	0	0

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FIGURE 8

Bit position	1	2	3	4	5	6	7,8	9	10	11-13	14	15-16	17	18-28	29	30-59	60	61	62
PNBA	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	0	0

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FIGURE 9

Bit position	1	2	3	4	5	6	7,8	9	10	11-13	14	15-16	17	18-28	29	30-59	60	61	62
PNBA	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0

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The diagram shows a table with 10 rows, each representing a prefix entry. The table has columns for Row i, Listed Prefix, Decimal Value of Prefix String, Prefix Length |S|, Next Hop Info, and PNBA bit Position b_i . A curved arrow labeled 42 points to the 'Listed Prefix' column. Another curved arrow labeled 44 points to the 'Decimal Value of Prefix String' column. A curved arrow labeled 54 points to the 'Prefix Length |S|' column. A curved arrow labeled 46 points to the 'Next Hop Info' column. A curved arrow labeled 48 points to the 'PNBA bit Position b_i ' column. A curved arrow labeled 52 points to the top of the table.

Row i	Listed Prefix	Decimal Value of Prefix String	Prefix Length S	Next Hop Info	PNBA bit Position b_i
1	0	0	1	nh_1	1
2	00	0	2	nh_2	3
3	0010	2	4	nh_3	17
4	01	1	2	nh_4	4
5	010	2	3	nh_5	9
6	011	3	3	nh_6	10
7	1	1	1	nh_7	2
8	11	3	2	nh_8	6
9	1110	14	4	nh_9	29
10	11111	31	5	nh_{10}	62

FIGURE 6

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The diagram shows a 10x3 table with three columns: Position, Next Hop Info, and Associated PNBA bit Position. Arrows point from the numbers 70, 62, 64, and 60 to the cells in the third column at positions 1, 2, 3, and 4 respectively. The table is as follows:

Position	Next Hop Info	Associated PNBA bit Position
1	nh_1	1
2	nh_7	2
3	nh_2	3
4	nh_4	4
5	nh_8	6
6	nh_5	9
7	nh_6	10
8	nh_3	17
9	nh_9	29
10	nh_{10}	62

FIGURE 7

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Diagram illustrating a table with 10 rows and 9 columns. The table is labeled with row numbers 1 through 10. The columns are labeled: Row i , Listed, Decimal Value of bit Prefix, Full Prefix Length, Prefix Length $|S|$, Next Hop Info, PNBA bit Position b_i , and PNBA bit Value. Row 10 is highlighted with a box. A curved arrow labeled 71 points to the top of the table. Numbered arrows 44, 73, 46, 75, 48, 77, and 79 point to the 'Listed', 'Decimal Value of bit Prefix', 'Full Prefix Length', 'Prefix Length |S|', 'Next Hop Info', 'PNBA bit Position b_i ', and 'PNBA bit Value' columns respectively. A label 42 with an arrow points to the first row.

Row i	Listed	Decimal Value of bit Prefix	Full Prefix Length	Prefix Length $ S $	Next Hop Info	PNBA bit Position b_i	PNBA bit Value
1	0	0	1	1	nh_1	1	1
2	00	0	2	2	nh_2	3	1
3	0010	0	4	2	nh_3	3	0
4	01	1	2	2	nh_4	4	1
5	010	1	3	2	nh_5	4	0
6	011	1	3	2	nh_6	4	0
7	1	1	1	1	nh_7	2	1
8	11	3	2	2	nh_8	6	1
9	1110	3	4	2	nh_9	6	0
10	11111	3	5	2	nh_{10}	6	0

FIGURE 10

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1)	0	-
2)	1	-
3)	0	0
4)	0	1
5)	1	0
6)	1	1

FIGURE 11



Bit Position	1	2	3	4	5	6
PNBA	1	1	1	1	0	1

FIGURE 12

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The diagram illustrates the mapping of Next Hop Info (nh₁ to nh₁₀) to their corresponding First PNBA bit positions (1 to 10) and subsequent PNBA bit positions (2, 5, 1, 2, 5, 2, 5, 1, 2, 5). The mapping is as follows:

- nh₁: First PNBA bit Position 1, Second PNBA bit Position -
- nh₇: First PNBA bit Position 2, Second PNBA bit Position -
- nh₂: First PNBA bit Position 3, Second PNBA bit Position -
- nh₄: First PNBA bit Position 4, Second PNBA bit Position -
- nh₈: First PNBA bit Position 6, Second PNBA bit Position -
- nh₃: First PNBA bit Position -, Second PNBA bit Position 5
- nh₅: First PNBA bit Position -, Second PNBA bit Position 1
- nh₆: First PNBA bit Position -, Second PNBA bit Position 2
- nh₉: First PNBA bit Position -, Second PNBA bit Position 5
- nh₁₀: First PNBA bit Position -, Second PNBA bit Position 2

Position	Next Hop Info	First PNBA bit Position	Second PNBA bit Position	Third PNBA bit Position	Fourth PNBA bit Position	Fifth PNBA bit Position
1	nh ₁	1	-	-	-	-
2	nh ₇	2	-	-	-	-
3	nh ₂	3	-	-	-	-
4	nh ₄	4	-	-	-	-
5	nh ₈	6	-	-	-	-
6	nh ₃	-	5	-	-	-
7	nh ₅	-	-	1	-	-
8	nh ₆	-	-	2	-	-
9	nh ₉	-	-	-	5	-
10	nh ₁₀	-	-	-	-	2

FIGURE 13

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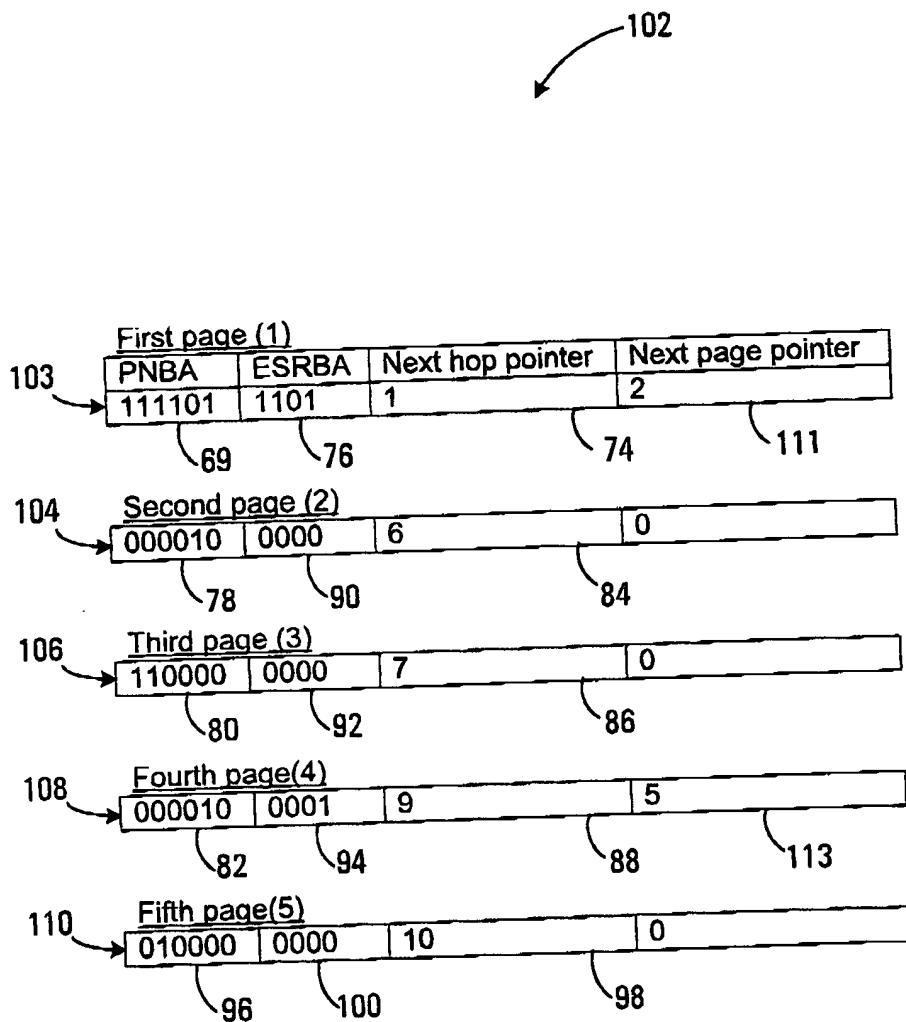


FIGURE 14

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FIRST ESRBA				
Bit Position	1(00)	2(01)	3(10)	4(11)
ESRBA	1	1	0	1

FIGURE 15

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FIRST PNBA MASK					
Bit position	1	2	3	4	5
PNBA	0	1	0	0	0

FIGURE 16

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SECOND PNBA MASK					
Bit position	1	2	3	4	5
PNBA	0	1	0	0	1

FIGURE 17

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THIRD PNBA MASK					
Bit position	1	2	3	4	5
PNBA	0	1	0	0	0

FIGURE 18

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FIRST RESULTANT PNBA					
Bit position	1	2	3	4	5
PNBA	0	1	0	0	0

FIGURE 19

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FIRST ESRBA MASK				
Bit position	1	2	3	4
ESRBA	0	0	0	1

FIGURE 20

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SECOND ESRBA MASK

Bit position	1	2	3	4
ESRBA	0	0	1	0

FIGURE 21

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THIRD ESRBA MASK

Bit position	1	2	3	4
ESRBA	0	0	0	0

FIGURE 22

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FIRST RESULTANT ESRBA

Bit position	1	2	3	4
ESRBA	0	0	0	1

FIGURE 23

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SECOND RESULTANT PNBA

Bit position	1	2	3	4	5	6
PNBA	0	0	0	0	1	0

FIGURE 24

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SECOND RESULTANT ESRBA

Bit position	1	2	3	4
ESRBA	0	0	0	0

FIGURE 25

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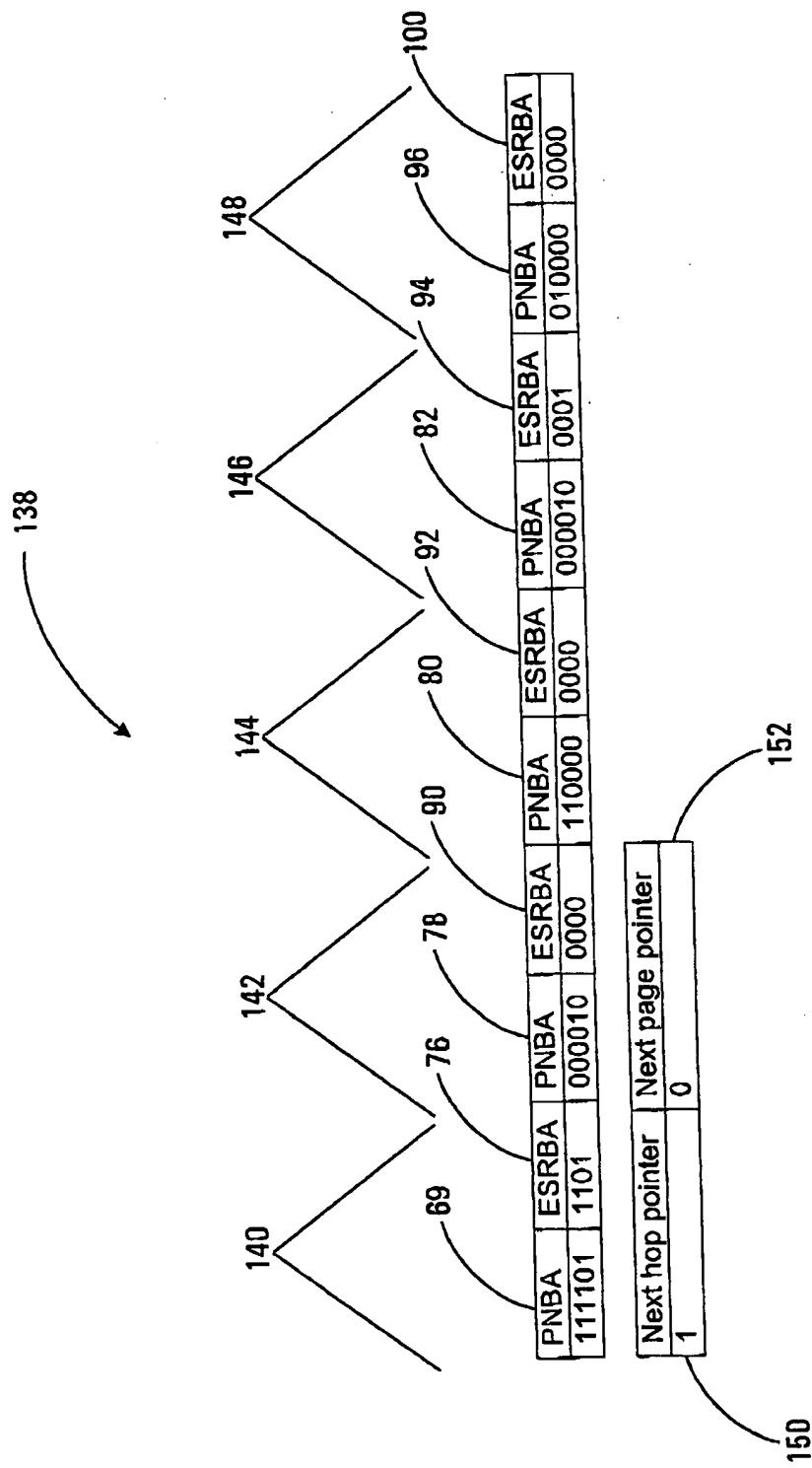


FIGURE 26